IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~Solar~~ A solar energy powered lamp driver ~~(100; 200)~~ capable of driving a gas discharge lamp ~~(L)~~, comprising:

[[-]] a half-bridge inverter ~~(130)~~, comprising:

[[--]] a first branch of two ~~controllable~~ switches ~~(131, 132)~~ coupled in series between a first reference node ~~(V1)~~ and a second reference node ~~(mass)~~;

[[--]] a second branch of two buffer capacitors ~~(133, 134)~~ coupled in series between said first reference node ~~(V1)~~ and said second reference node ~~(mass)~~;

[[--]] an output branch ~~(DE)~~ connected between ~~on the one hand~~ a first node ~~(D)~~ between said two ~~controllable~~ switches ~~(131, 132)~~ and ~~on the other hand~~ a second node ~~(E)~~ between said two

buffer capacitors ~~(133, 134)~~;

an AC mains source connected across the output branch for providing AC power having a mains frequency which is less than a switching frequency of the two switches; and

[[-]] a boost converter ~~(110)~~, having an output ~~(115)~~ connected directly to said first node ~~(D)~~ between said two ~~controllable~~ switches ~~(131, 132)~~.

2. (Currently Amended) ~~Driver~~ The solar energy powered lamp driver according to claim 1, wherein the output branch ~~(DE)~~ comprises a series arrangement of ~~a~~ gas discharge lamp ~~(L)~~ output, a decoupling capacitor ~~(135)~~ and an inductor ~~(136)~~.

3. (Currently Amended) ~~Driver~~ The solar energy powered lamp driver according to claim 1, ~~wherein the output branch (DE) comprises a series arrangement of~~ further comprising an inductor ~~(137) and an~~ connected in series with the AC mains ~~input/output (138)~~ source across the output branch.

4. (Currently Amended) ~~Driver~~ The solar energy powered lamp

driver according to claim 1, wherein the output branch ~~(DE)~~

comprises a first series arrangement of ~~a~~ the gas discharge lamp

~~(L) output~~, a decoupling capacitor ~~(135)~~ and an inductor ~~(136)~~, and

~~also comprises~~ a second series arrangement of an inductor ~~(137)~~ and

~~an~~ the AC mains ~~input/output (138)~~ source, said second series

arrangement being connected in parallel to said first series

arrangement.

   5. (Currently Amended) ~~Driver~~ The solar energy powered lamp

driver according to claim 4, ~~wherein~~ further comprising a switch

controller ~~(140) is~~ adapted to drive said two switches ~~(131, 132)~~

at a switching frequency ~~well~~ above ~~a~~ the mains frequency,

~~preferably at a~~ the switching frequency being not lower than 20

kHz~~, more preferably at a switching frequency in the order of 40-50~~

~~kHz~~.

   6. (Currently Amended) ~~Driver~~ The solar energy powered lamp

driver according to claim 5, wherein said decoupling capacitor

~~(135)~~ has a ~~relatively large~~ first impedance for the mains

frequency and a ~~relatively low~~ second impedance for the ~~switch~~

~~operating~~ switching frequency, the first impedance being larger

than the second impedance.

7. (Currently Amended) ~~Driver~~ The solar energy powered lamp

driver according to claim 5, wherein said inductor ~~(137)~~ has a

~~relatively high~~ first impedance for the ~~switch operating~~ switching

frequency and a ~~relatively low~~ second impedance for the mains

frequency, the first impedance being larger than the second

impedance.

8. (Currently Amended) ~~Driver~~ The solar energy powered lamp

driver according to claim 1, wherein the output branch ~~(DE)~~

comprises a transformer driving a rectifier.

9. (Currently Amended) ~~Driver~~ The solar energy powered lamp

driver according to claim 1, further comprising a switch controller

~~(140)~~ adapted to generate control signals for controlling said two

switches ~~(131, 132)~~ to either ~~their~~ conductive or their non-

conductive ~~state~~ states, the switch controller ~~(140)~~ being adapted

to drive the two switches with a combination of frequency

modulation ~~(FM)~~ and pulse width modulation ~~(PWM)~~.

10. (Currently Amended) ~~Driver~~ The solar energy powered lamp driver according to claim 9, wherein the switch controller ~~(140)~~ is adapted to set the switching frequency of the two switches ~~(131, 132)~~ such as to obtain a ~~certain~~ desired lamp current, and to set ~~the~~ a duty cycle of the two switches such as to obtain a ~~certain~~ desired mains current.

11. (Currently Amended) ~~Driver~~ The solar energy powered lamp driver according to claim 10, wherein the switch controller ~~(140)~~ is adapted to maintain a fixed switching frequency.

12. (Currently Amended) ~~Driver~~ The solar energy powered lamp driver according to claim 10, wherein the switch controller ~~(140)~~ is adapted to set a common switching frequency for the two switches ~~(131, 132)~~ and to set individual duty cycles for the two switches ~~(131, 132)~~.

13. (Currently Amended) ~~Driver~~ The solar energy powered lamp

driver according to claim 1, wherein the boost converter (110)

comprises at least one photo-voltaic cell (111), a boost inductor

(112) having one terminal coupled to an output of the photo-voltaic

cell (111) and having its other another terminal coupled to a first

terminal of a rectifying element (114), the rectifying element

having an output terminal coupled to the output (115) of the boost

converter (110).

14. (Currently Amended) Driver The solar energy powered lamp

driver according to claim 13, wherein the boost converter (110)

further comprises an additional controllable switch (113) connected

between on the one hand the second reference node and a node A

between the boost inductor (112) and the rectifying element (114)

and on the other hand the second reference node (mass).

15. (New) The solar energy powered lamp driver, wherein the

mains frequency is substantially 50-60 Hz.